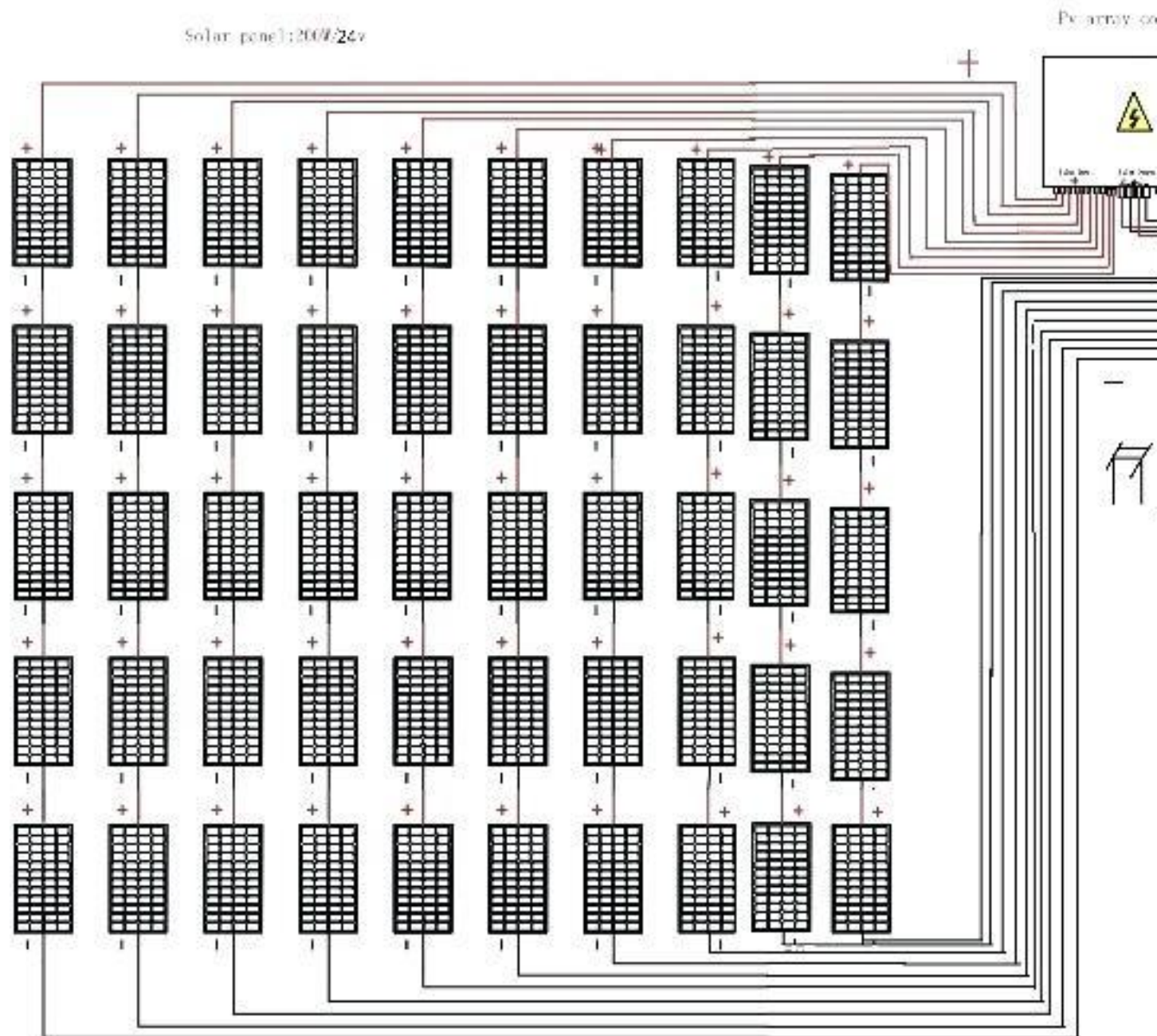
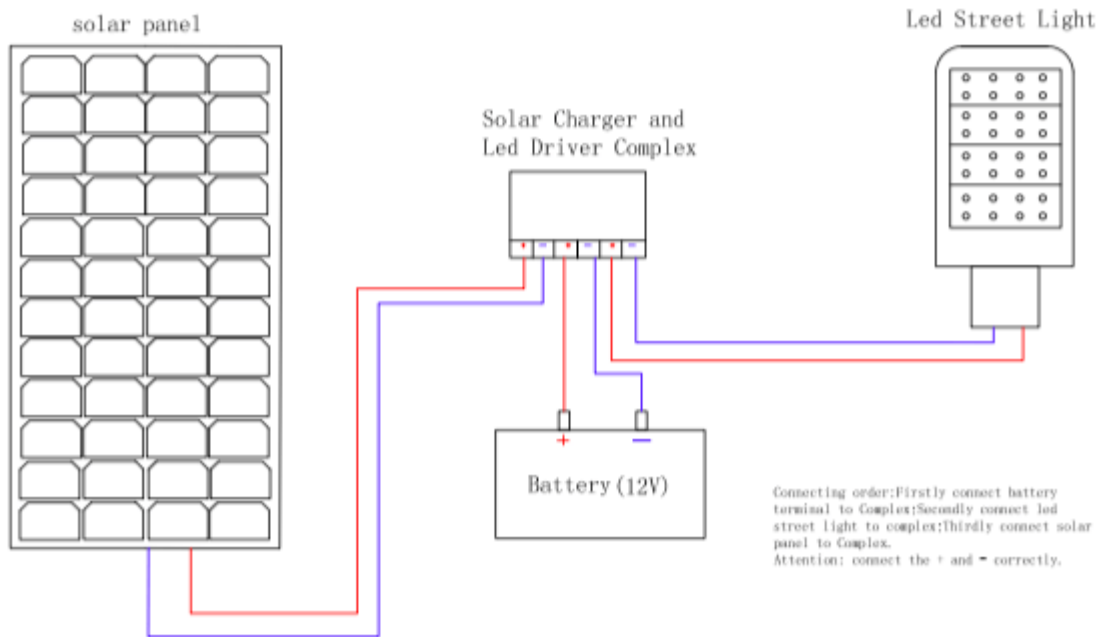
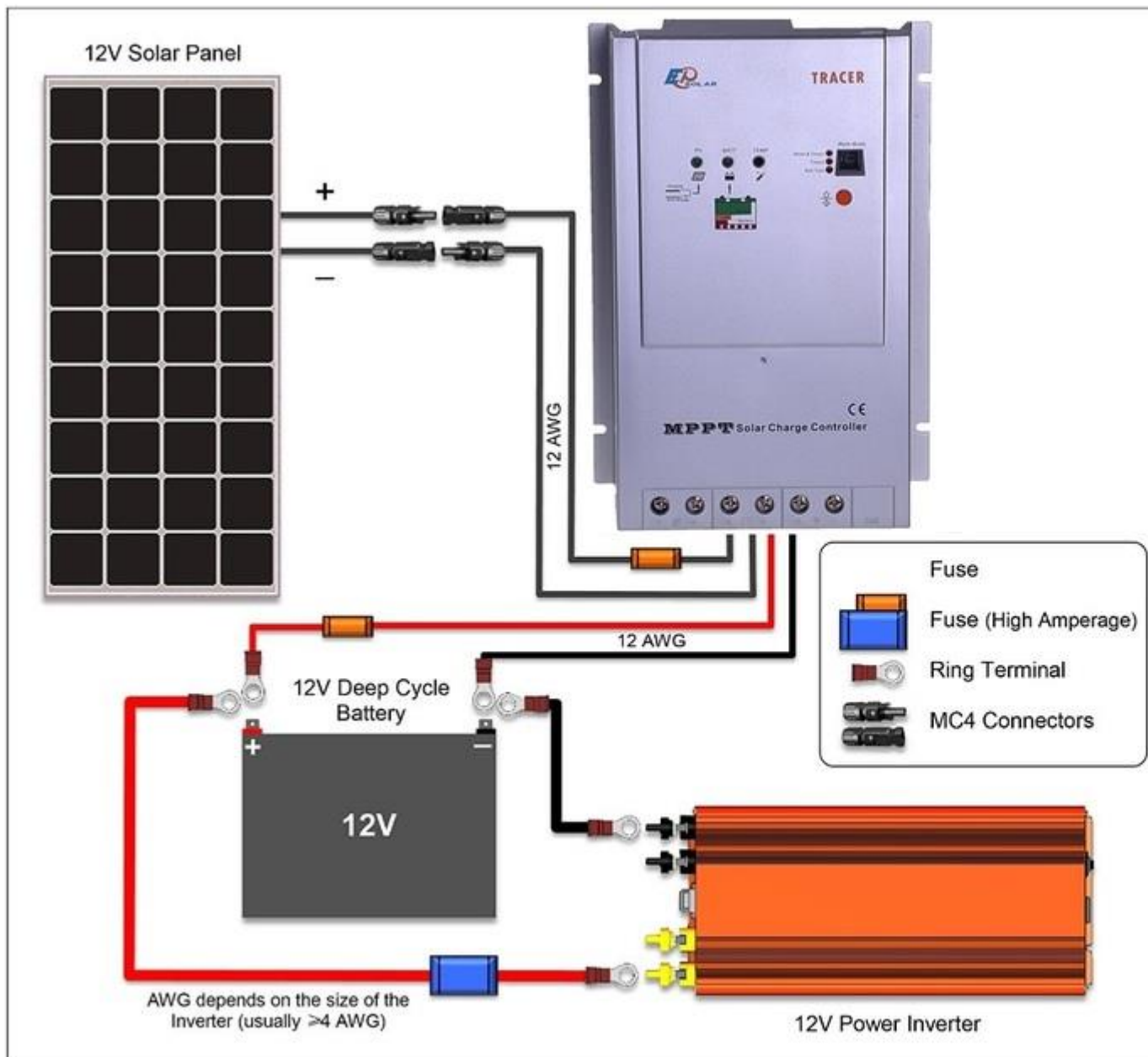


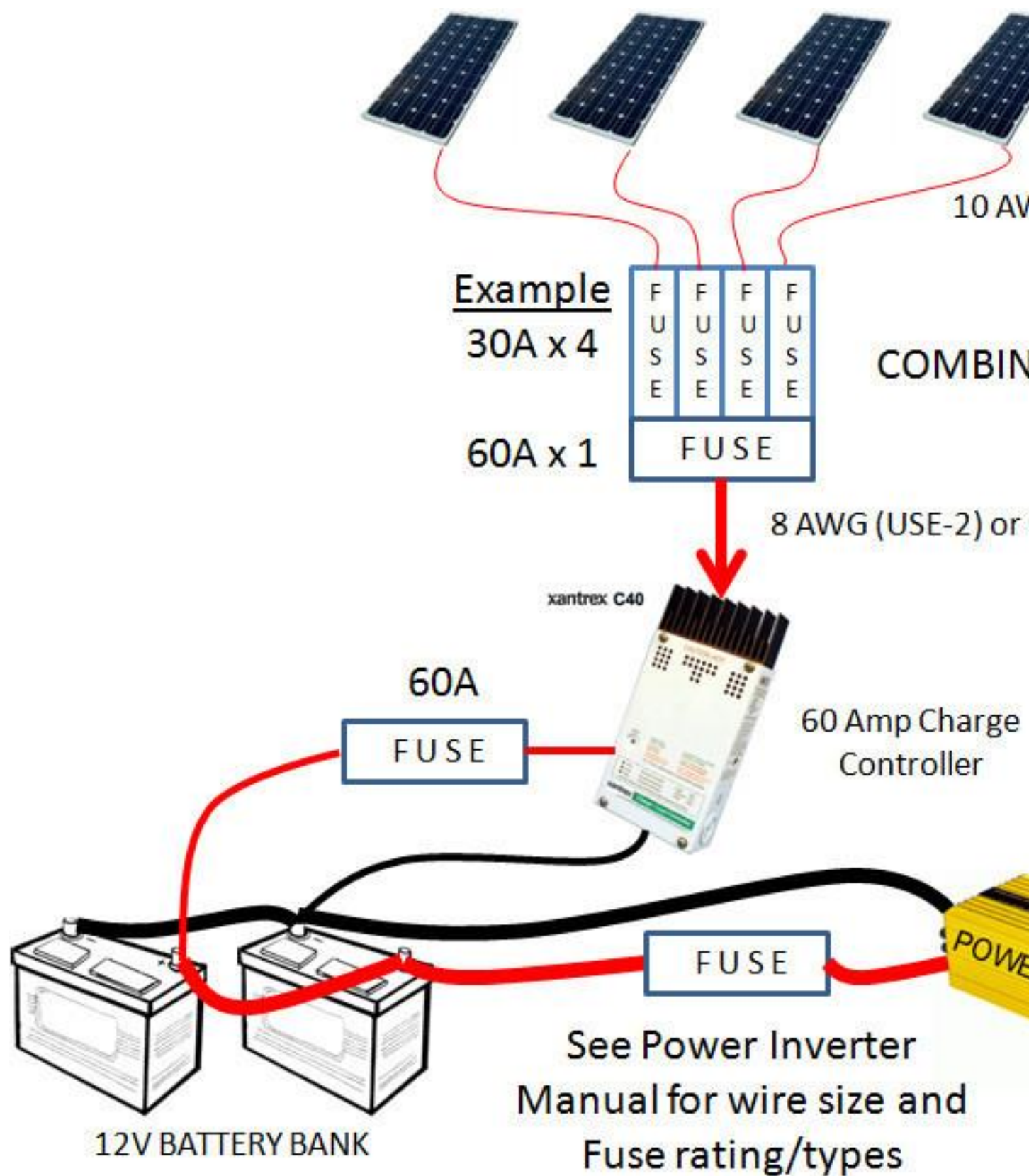
10KW solar po



12V Solar Led Street Light Wiring Diagram





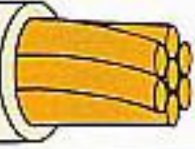
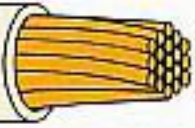
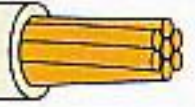
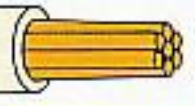


OY Not Solar Basic PV Voltage Drop Calculator									
Wire Temp					Voltage				
(c) or (f)			Celsius	Fahrenheit	Array Voltage			Battery Bank Voltage	
c			25	77	17.4			12.5	
Total			Resistance Array						
	Item Name	AWG	Feet	Ohms	Panel (Volts)	Panel (Amps)	Voltage drop	Voltage drop %	
7	String 1 Fearless 135	16	80	0.327592	17.4	7.76	2.54211	14.60985%	
8	String 2 Fearless 135	14	80	0.205969	17.4	7.76	1.59832	9.18172%	
9	String 3 Fearless 135	12	80	0.129536	17.4	7.76	1.00520	5.77700%	
10	String 4 Fearless 135	10	80	0.081482	17.4	7.76	0.63230	3.63291%	
11	String 5 Fearless 135	8	80	0.051243	17.4	7.76	0.39765	2.28554%	
12	String 6 Fearless 135	6	80	0.032229	17.4	7.76	0.25010	1.43734%	
13	String 7 Fearless 135	4	80	0.020271	17.4	7.76	0.15730	0.90402%	
14	String 8 Fearless 135	2	80	0.012750	17.4	7.76	0.09894	0.56851%	
15	Array To Combiner →			0.004849	17.40	62.08	0.30165	1.73015%	
16	Combiner Breaker to Charge Controller	10	100	0.101852	17.4	62.08	6.32300	36.33599%	
17	Charge Controller to Output Breaker	2	4	0.000637	17.4	62.08	0.03957	0.22744%	
18	Controller Output Breaker to Battery	2	20	0.001187	12.50	86.42	0.27544	2.20353%	
19	Voltage Drop from Array to Controller →→→→→						6.86363	38.29673%	⚠ Keep Volt Drop under 3%
20	Voltage drop from Array to Battery →→→→→						6.93907	40.50026%	
21									

windynation Power to the people						
2% Voltage Drop Chart						
AWG =	14	12	10	8	6	4
Capacity(AMPS)	15	20	30	40	55	70
ARRAY AMPS	FEET ONE WAY FOR A PAIR OF WIRES					
1	45	70	115	180	290	456
2	22.5	35	57.5	90	145	228
4	10	17.5	27.5	45	72.5	114
6	7.5	12	17.5	30	47.5	75
8	5.5	8.5	11.5	22.5	35.5	57
10	4.5	7	9.5	18	28.5	45.5
15	3	4.5	7	12	19	30
20	2	3.5	5.5	9	14.5	22.5
25	1.8	2.8	4.5	7	11.5	18
30	1.5	2.4	3.5	6	9.5	15
40			2.8	4.5	7	11.5
50			2.3	3.6	5.5	9
100					2.9	4.6

Enter solar system working voltage in V	12	
Enter expected working peak power in W	281	W
Enter cable's working temperature	20	Celsius
Enter desired voltage drop in %	5	%
Enter supposed cable length	12.4	meter
Cable wire size needed in mm ² /cross sectional area/	8.34	
Wire diameter in inches	0.13	
The cable should withstand maximum current in A	29.3	

Normal Residential usage

A	3/0 Gauge		200 Amps Service entrance
	1/0 Gauge		150 Amps Service entrance and feeder wire
	3 Gauge		100 Amps Service entrance and feeder wire
B	6 Gauge		55 Amps Feeder and large appliance wire
	8 Gauge		40 Amps Feeder and large appliance wire
C	10 Gauge		30 Amps Dryers, appliances, and air conditioning
	12 Gauge		20 Amps Appliance, laundry and bathroom circuits
D	14 Gauge		15 Amps General lighting and receptacle circuits

windynation
clean|power to the people

